

WHAT IS CLAIMED IS:

1. A system for providing lifeline telecommunication service, comprising:

5 a gateway operable to receive telecommunication information from a telecommunication switch and to generate data packets for communicating the telecommunication information;

10 an analog signal service module remotely coupled to the gateway and operable to receive the data packets from the gateway and to generate a first analog telephone signal for communicating the telecommunication information over a local loop circuit;

15 an integrated access device coupled to the local loop circuit and operable to receive the first analog telephone signal from the analog signal service module and to communicate the first analog telephone signal to a subscriber line in a first mode of operation, the integrated access device further operable to receive the data packets from the gateway, to process the data packets to generate a second analog telephone signal communicating the telecommunication information, and to communicate the second analog telephone signal to the subscriber line in a second mode of operation.

20 2. The system of Claim 1, wherein the data packets are communicated to the integrated access device over the local loop circuit using a digital subscriber line in the second mode of operation.

25 3. The system of Claim 1, wherein the integrated access device operates in the first mode if it does not have power and in the second mode if it has power.

4. The system of Claim 1, wherein the gateway is further operable to:
determine whether it can communicate with the integrated access device using
the data packets;

5 communicate the data packets to the integrated access device in response to
determining that it can communicate with the processing module using the data
packets; and

communicate the data packets to the analog signal service module in response
to determining that it cannot communicate with the integrated access device using the
data packets.

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5. The system of Claim 4, wherein the gateway determines that it cannot
communicate with the integrated access device if the gateway cannot maintain a
virtual circuit between itself and the integrated access device.

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6. The system of Claim 1, wherein the integrated access device
comprises:

a processing module operable to receive the data packets from the gateway
and to process the data packets to generate the second analog telephone signal
communicating the telecommunication information in the second mode of operation;
and

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a bypass switch operable to communicate the first analog telephone signal to
the subscriber line in the first mode of operation and to communicate the second
analog telephone signal to the subscriber line in the second mode of operation.

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7. The system of Claim 1, wherein:
the telecommunication information is voice information; and
the first and second analog telephone signals are voice signals.

8. A system for providing lifeline telecommunication service to customer premises equipment, comprising:

a telecommunication interface operable to receive telecommunication information from a telecommunication switch;

5 a data packet service module coupled to the telecommunication interface and operable to receive the telecommunication information from the telecommunication interface and to generate data packets for communicating the telecommunication information, the data packet service module further operable to communicate the data packets to an analog signal service module in a first mode of operation and to
10 communicate the data packets over a local loop circuit to customer premises equipment in a second mode of operation.

9. The system of Claim 8, wherein the data packet service module communicates the data packets over the local loop circuit to the customer premises
15 equipment using a digital subscriber line access multiplexer (DSLAM).

10. The system of Claim 8, further comprising a management module operable to:

determine whether the data packet service module can communicate data
20 packets with the customer premises equipment;
select the first mode of operation in response to determining that the data packet service module cannot communicate data packets with the customer premises equipment; and

select the second mode of operation in response to determining that the data
25 packet service module can communicate data packets with the customer premises equipment.

11. The system of Claim 10, wherein the management module determines that the data packet service module cannot communicate data packets with the
30 customer premises equipment if the data packet service module cannot maintain a virtual circuit between the gateway and the customer premises equipment.

12. The system of Claim 8, wherein the analog signal service module is remotely coupled to the telecommunication interface using a digital link.

5 13. The system of Claim 8, wherein the analog signal service module is operable to process the data packets to generate an analog telephone signal for communicating the telecommunication information over the local loop circuit to the customer premises equipment.

14. A method of providing lifeline telecommunication service to customer premises equipment using a gateway, comprising:

receiving telecommunication information from a telecommunication switch;

generating data packets for communicating the telecommunication information;

communicating the data packets to an analog signal service module in a first mode of operation; and

communicating the data packets over a local loop circuit to customer premises equipment in a second mode of operation.

15. The method of Claim 14, further comprising:

processing the data packets to generate a first analog telephone signal at the analog signal service module; and

communicating the first analog signal over the local loop circuit.

16. The method of Claim 15, further comprising:

communicating the first analog telephone signal from the local loop circuit to a subscriber line in the first mode of operation; and

processing the data packets from the local loop circuit to generate a second analog telephone signal for communication to the subscriber line in the second mode of operation.

17. The method of Claim 14, wherein communicating the data packets over the local loop circuit to the customer premises equipment further comprises using a digital subscriber line.

18. The method of Claim 14, further comprising:

identifying a destination integrated access device (IAD) for the telecommunication information;

5 determining whether the gateway can communicate with the IAD using the data packets;

selecting the first mode of operation in response to determining that the gateway cannot communicate with the IAD using the data packets; and

selecting the second mode of operation in response to determining that the gateway can communicate with the IAD using the data packets.

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19. The method of Claim 18, wherein determining whether the gateway can communicate with the IAD using the data packets further comprises determining whether the gateway can maintain a virtual circuit between itself and the IAD.

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20. The method of Claim 18, further comprising determining that the gateway cannot communicate with the IAD using the data packets if the IAD loses powers, is disconnected from the local loop circuit, or has an internal failure.